TS100-E7/PI4

Configuration Guide

E6702

First Edition V1
June 2011

Copyright © 2011 ASUSTeK COMPUTER INC. All Rights Reserved.

No part of this manual, including the products and software described in it, may be reproduced, transmitted, transcribed, stored in a retrieval system, or translated into any language in any form or by any means, except documentation kept by the purchaser for backup purposes, without the express written permission of ASUSTeK COMPUTER INC. (“ASUS”).

ASUS provides this manual “as is” without warranty of any kind, either express or implied, including but not limited to the implied warranties or conditions of merchantability or fitness for a particular purpose. In no event shall ASUS, its directors, officers, employees, or agents be liable for any indirect, special, incidental, or consequential damages (including damages for loss of profits, loss of business, loss of use or data, interruption of business and the like), even if ASUS has been advised of the possibility of such damages arising from any defect or error in this manual or product.

Specifications and information contained in this manual ae furnished for informational use only, and are subject to change at any time without notice, and should not be construed as a commitment by ASUS. ASUS assumes no responsibility or liability for any errors or inaccuracies that may appear in this manual, including the products and software described in it.

Product warranty or service will not be extended if: (1) the product is repaired, modified or altered, unless such repair, modification of alteration is authorized in writing by ASUS; or (2) the serial number of the product is defaced or missing.

Products and corporate names appearing in this manual may or may not be registered trademarks or copyrights of their respective companies, and are used only for identification or explanation and to the owners’ benefit, without intent to infringe.

Contents

Safety information iv

Chapter 1: Product introduction

1.1 Key features 1-2
1.2 System overview 1-3
1.3 Front panel features 1-4
1.4 Rear panel features 1-5
1.5 System specifications 1-6

Chapter 2: Components

2.1 Upgrading CPU and CPU heatsink 2-2
2.2 Upgrading system memory 2-3
2.3 Upgrading hard disk drives 2-4
2.4 OS support list 2-5

Safety information

Electrical Safety

- Before installing or removing signal cables, ensure that the power cables for the system unit and all attached devices are unplugged.
- To prevent electrical shock hazard, disconnect the power cable from the electrical outlet before relocating the system.
- When adding or removing any additional devices to or from the system, contact a qualified service technician or your dealer. Ensure that the power cables for the devices are unplugged before the signal cables are connected. If possible, disconnect all power cables from the existing system before you service.
- If the power supply is broken, do not try to fix it by yourself. Contact a qualified service technician or your dealer.

Operation Safety

- Servicing of this product or units is to be performed by trained service personnel only.
- Before operating the server, carefully read all the manuals included with the server package.
- Before using the server, ensure all cables are correctly connected and the power cables are not damaged. If any damage is detected, contact your dealer as soon as possible.
- To avoid short circuits, keep paper clips, screws, and staples away from connectors, slots, sockets and circuitry.
- Avoid dust, humidity, and temperature extremes. Place the server on a stable surface.

This product is equipped with a three-wire power cable and plug for the user's safety. Use the power cable with a properly grounded electrical outlet to avoid electrical shock.

Lithium-Ion Battery Warning

CAUTION! Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions.

CD-ROM Drive Safety Warning

CLASS 1 LASER PRODUCT

Heavy System

CAUTION! This server system is heavy. Ask for assistance when moving or carrying the system.

Chapter 1

This chapter describes the key features of TS100-E7/PI4. It includes the product overview and general specifications.

Product introduction

1.1 Key features

The TS100-E7/PI4 is a single-socket pedestal server system based on quad/dual-core Intel® E3-1200/CoreTM i3-2100 series processors and the Intel® C202 PCH chipset with support for up to 32GB of DDR3 1333Hz unbuffered ECC memory. Upscaled performance increases processing speeds, while the super-quiet design makes the TS100-E7/PI4 ideal for professional environments where noise reduction is important.

The latest Intel® CPUs

The TS100-E7/PI4 is ready for new-generation IntelR® Xeon® 32nm quad/dual-core UP processors, which deliver a significant performance improvement (up to 25%) over previous generation CPUs. Also, with Intel® Turbo Boost Technology 2.0, the TS100-E7/PI4 provides more efficient, dynamic, and intelligent performance enhancement on demand.

Ultra-quiet and energy-saving

Strict acoustic testing has shown that the TS100-E7/PI4 performs excellently in noise control at less than 25.6dBA when idle – even lower than the noise output of a projector (42dB). It facilitates quiet working environments, and ships with an 80+ power supply to reduce power loss and power consumption, helping consumers save on energy bills.

Dual Intel® server-class Gigabit LAN

The TS100-E7/PI4 offers more reliable networking and wide- range virtualization, including VMWare®, Hyper-V and Xen. IPv6 readiness effortlessly resolves potential IPv4 address shortage problems even before they occur.

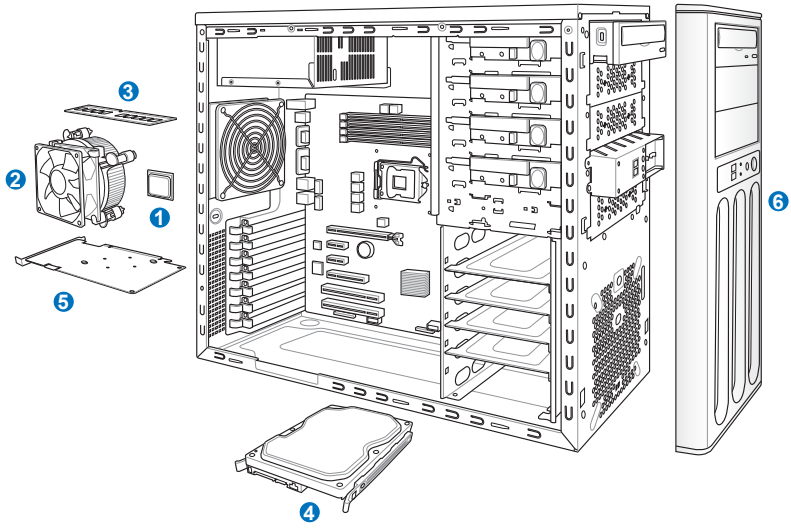
Optional ASUS TPM module

With the ASUS TPM module supporting TXT technology, the TS100-E7/PI4 avoids Trojan and malware incursions, while Hypervisor loads on start-up to provide hardware-level security against software attacks, protecting data from memory snooping.

Effortless install

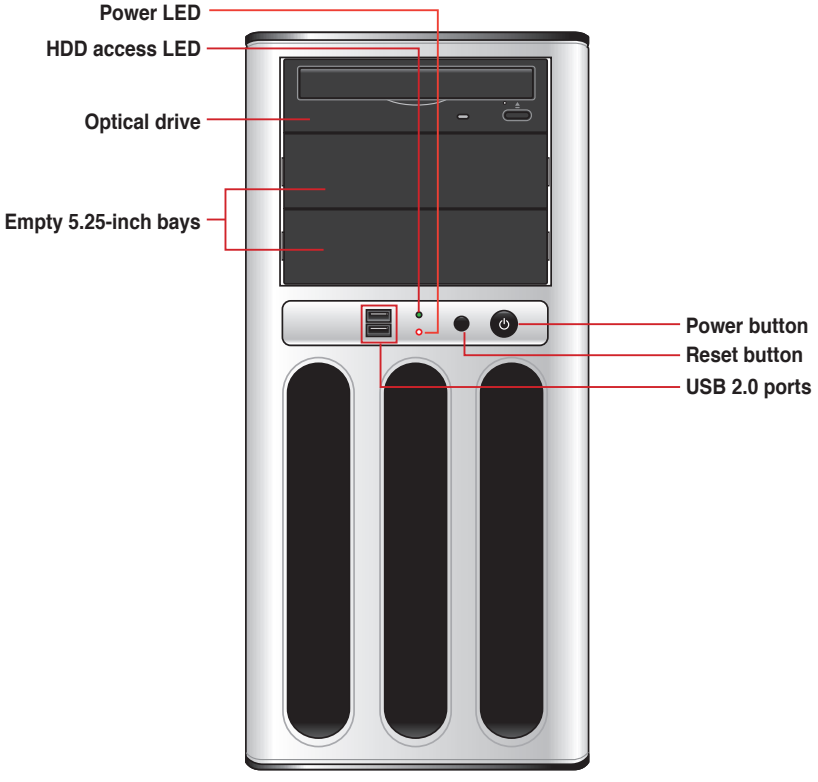
Auto-setup in a few simple steps and the intuitive support CD mean users don't need to go through a lengthy process as the install is pre-configured, and all device drivers arrive fully installed with the latest versions, saving IT staff time and effort.

1.2 System overview

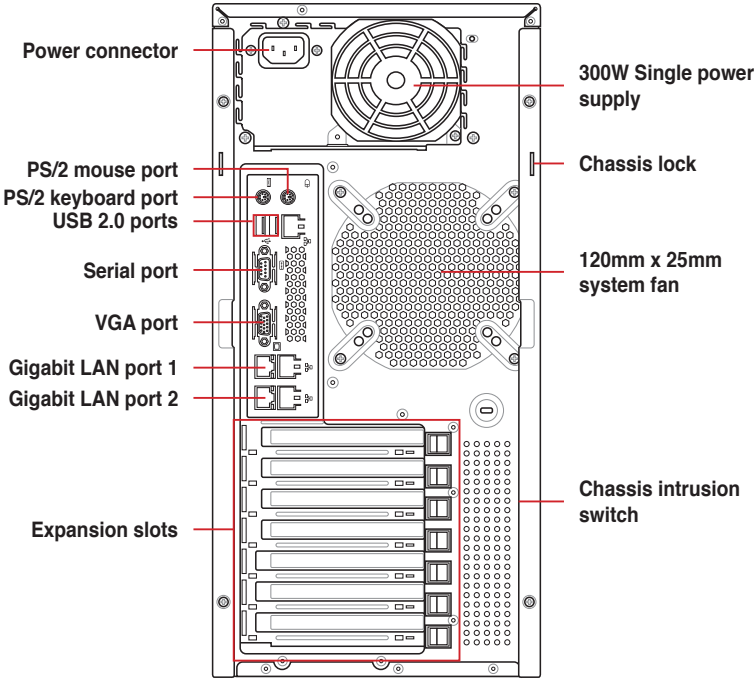


Items	Items
1. Central processing unit (CPU)	4. Hard disk drives
2. CPU heatsink and fan	5. VGA card (optional)
3. System memory	6. Front Panel Cover

1.3 Front panel features



1.4 Rear panel features



1.5 System specifications

Model Name		TS100-E7/PI4
Processor / System Bus		1* socket LGA1155 Intel® Xeon® E3-1200 Processor Family Intel® Core™ i3-2100 Processor Family
Core Logic		Intel® C202 Chipset
Memory	Total Slots	4 DIMMs(2 Channels)
	Capacity	Maximum up to 32GB
	Memory Type	DDR3 1066/1333 ECC UDIMM
	Memory Size	1 GB, 2GB, 4GB, 8GB
Expansion Slots	Total PCI/PCI-X/ PCI-E Slots	6
	Slot Type	1x PCI-E G2 x16 slot (x16 link) 1x PCI-E G2 x 8 slot (x4 link) 2x PCI-E G2 x1 slot (x1 link) 2 x PCI 32/33 5V
Storage		Intel® C202: 6 SATA 3Gb/s ports Intel Rapid Storage (for Windows only) (Support software RAID 0, 1, 10, 5) LSI® MegaRAID (for Linux/Windows) (Support software RAID 0, 1, 10)
HDD Bays	I = internal A or S = hot-swappable	4 * Internal 3.5" SATA2 HDD Bays
Networking	LAN	2 * Intel 82574L
Graphic	VGA	Z9s
Auxiliary Storage FDD / CD / DVD		3 * 5.25" media bays (Options: No Device / DVD-RW)
Onboard I/O		1 * External Serial Port 2 * RJ-45 ports 4* USB 2.0 ports (Front * 2, Rear * 2) 1 * VGA port 1 * PS/2 keyboard port 1 * PS/2 mouse port

(continued on the next page)

OS Support		Windows® Server 2008 R2 Windows® Server 2008 Enterprise 32/64-bit Windows® Server 2003 R2 Enterprise 32/64-bit RedHat® Enterprise Linux AS5.5/6.0 32/64-bit SuSE® Linux Enterprise Server 10 SP3/11 32/64-bit (Subject to change without any notice)
Anti-virus Software		Optional Anti-Virus CD Pack
Management Solution	**Software**	ASUS ASWM Enterprise
Dimension (HH x WW x DD)		436.8mm * 200mm * 478.8mm
Net Weight Kg (CPU, DRAM & HDD not inclu ded)		15 Kg
Power Supply		300W 80PLUS Single Power Supply
Power Rating		100—240Vac, 8—4A, 50—60Hz, Class I
Environment		Operation temperature: 10°C–35°C / Non operation temperature: -40°C–70°C Non operation humidity: 20%–90% (Non-condensing)

***Specifications are subject to change without notice.**

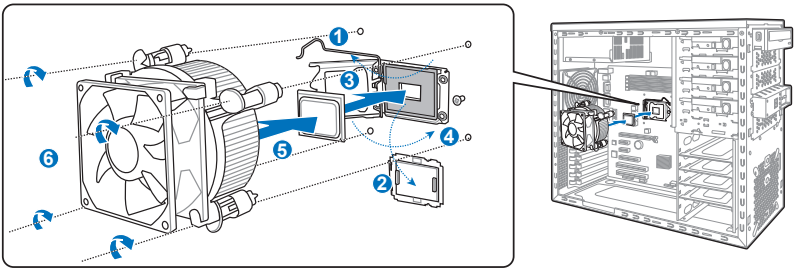
Chapter 2

This chapter lists the key components and optional accessories for the server system.

Components

2.1 Upgrading CPU and CPU heatsink

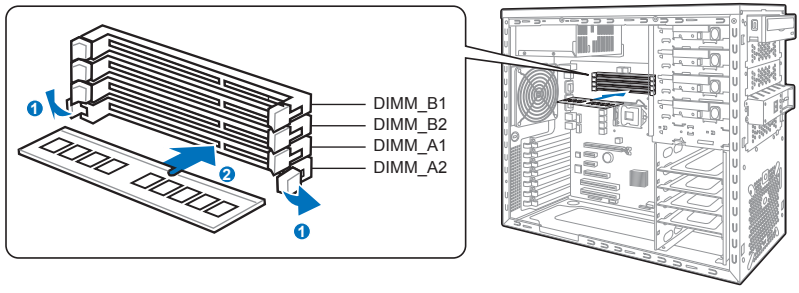
The ASUS TS100-E7/PI4 supports Dual-core / Quad-core Intel® LGA1155 Xeon® E3-1200 series processor.



Order P/N	Description
90-S000U09Y1T	Quad Core Intel Xeon E3-1220, 3.10GHz, 8MB L2 (Single pack, w/o cooler)
90-S000U09Z1T	Dual Core Intel Xeon E3-1220L, 2.20GHz, 3MB L2 (Single pack, w/o cooler)
90-S000U0A11T	Quad Core Intel Xeon E3-1225, 3.10GHz, 6MB L2 (Single pack, w/o cooler)
90-S000U0A21T	Quad Core Intel Xeon E3-1230, 3.20GHz, 8MB L2 (Single pack, w/o cooler)
90-S000U0A31T	Quad Core Intel Xeon E3-1235, 3.20GHz, 8MB L2 (Single pack, w/o cooler)
90-S000U0A41T	Quad Core Intel Xeon E3-1240, 3.30GHz, 8MB L2 (Single pack, w/o cooler)
90-S000U0A51T	Quad Core Intel Xeon E3-1245, 3.30GHz, 8MB L2 (Single pack, w/o cooler)
90-S000U0A61T	Quad Core Intel Xeon E3-1260L, 2.40GHz, 8MB L2 (Single pack, w/o cooler)
90-S000U0A71T	Quad Core Intel Xeon E3-1270, 3.40GHz, 8MB L2 (Single pack, w/o cooler)
90-S000U0A81T	Quad Core Intel Xeon E3-1275, 3.40GHz, 8MB L2 (Single pack, w/o cooler)
90-S000U0A91T	Quad Core Intel Xeon E3-1280, 3.10GHz, 12MB L2 (Single pack, w/o cooler)
90-S000U0BR0T	Quad Core Intel Xeon E3-1290, 3.10GHz, 12MB L2 (Single pack, w/o cooler)

2.2 Upgrading system memory

The motherboard comes with four (4) Double Data Rate 3 (DDR3) Dual Inline Memory Modules (DIMM) sockets.



You may install 1 GB, 2 GB, 4 GB, 8GB Unbuffered with ECC DDR3 DIMMs into the DIMM sockets using the memory configurations in this section.

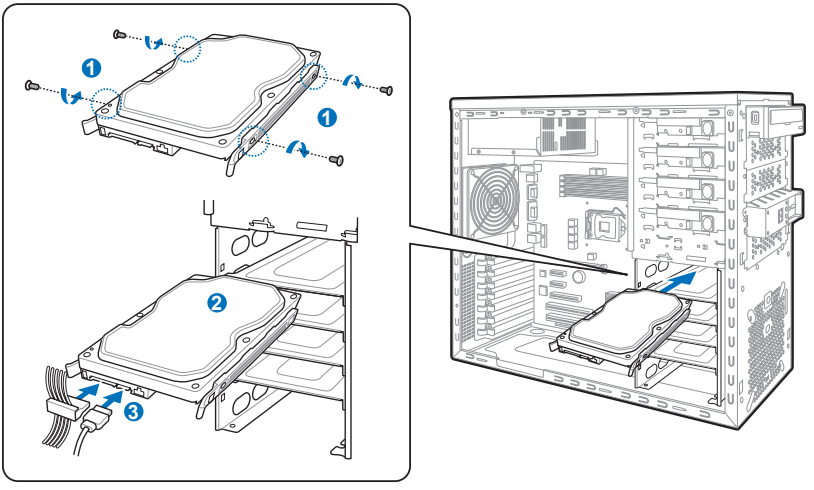
UDIMM				
DIMM Slot Per Channel	DIMM Populated per Channel	DIMM Type	Speed	Rank per DIMM
2	1	Unbuffered DDR3 ECC	1066/1333	Single Rank, Dual Rank
2	2	Unbuffered DDR3 ECC	1066/1333	Single Rank, Dual Rank

- Always install DIMMs with the same CAS latency. For optimum compatibility, it is recommended that you obtain memory modules from the same vendor.
- Install the DDR to the A2 or B2 (orange slot) when installing only one memory module to the motherboard.

Order P/N	Description
90-S000I05M0T	DDR3 1333 ECC UNB 2G 240P SINGLE PACK
90-S000I0570T	DDR3 1333 ECC UNB 4G 240P SINGLE PACK

2.3 Upgrading hard disk drives

The server system supports four Serial ATA hard disk drives through screw-free hard disk drive holders.



We recommend that you install identical drives of the same model and capacity for RAID configuration.

Order P/N	Description
90-S000H65B0T	3.5” SATA3 PHARAOH 1T 7200R / 6Gb SINGLE PACK
90-S000H65C0T	3.5” SATA3 PHARAOH 750G 7200R / 6Gb SINGLE PACK
90-S000H65D0T	3.5” SATA3 PHARAOH 500G 7200R / 6Gb SINGLE PACK

2.8 OS support list

Supplier	Component name and version	
Microsoft	Windows Server 2008 Enterprise Edition SP2	x86
	Windows Server 2008 Standard Edition R2	x64
	Windows 7	x86
	Windows 7	x64
Red Hat	Red Hat Enterprise Linux AS 5.5	x86
	Red Hat Enterprise Linux AS 5.5	x64
	Red Hat Enterprise Linux AS 6.0	x86
	Red Hat Enterprise Linux AS 6.0	x64
Novell	SuSE Linux Enterprise Server 11.1	x86
	SuSE Linux Enterprise Server 11.1	x64
CentOS	CentOS 5.5	x86
	CentOS 5.5	x64